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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,277	12/02/2003	Masato Fujiwara	CANO:101	3379

7590 09/22/2006
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EXAMINER

THOMAS, SHANE M

ART UNIT PAPER NUMBER

2186

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,277

Applicant(s)

FUJIWARA ET AL.

Examiner

Shane M. Thomas

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-21 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks •

Prosecution of the present application has been assumed by Examiner Shane Thomas.

This Office action is responsive to the amendment filed 6/29/2006. Claims 18-25 are currently pending; claims 1-17 have been canceled. The present Examiner notes that the present amendment to the claims has incorporated objected to subject matter that was deemed allowable over the prior art of record by the previous examiner; however, upon a supplemental search by the present Examiner, the prior art reference of Shimada (U.S. Patent Application Publication No. 2003/0073350) has been discovered and cited in the new rejections discussed herein. Accordingly, this Office action has been made **Non-Final**.

Claim Rejections - 35 USC § 101

Claim 25 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 25 recites a --control program-- and is not statutory as it is direct to software, per-se, and lacks storage on a medium which enables and underlying functionality to occur.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 18-20, and 23-25, are rejected under 35 U.S.C. 102(e) as being anticipated by Shimada (U.S. Patent Application Publication No. 2003/0073350).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

As per claims 18 and 23-25, Shimada teaches a **portable device** (figure 23) **comprising a storage cartridge 1 including a storage medium (¶94), a storage medium control device (electronic components) that performs writing of data in said storage medium and reading of data from the storage medium (¶94), and a casing** (figure 23 - elements 2 and 3) **that contains said storage medium and said storage medium control device.**

Shimada further teaches a **main unit 9 including a receiving and ejecting device 5 that receives said storage cartridge from an outside of said main unit (shown in figure 23) into a predetermined inner position (figures 29 and 30) within said main unit, and ejects said**

Art Unit: 2186

storage cartridge 1 out of said main unit from the predetermined inner position (figure 41), and a storage operation control device 135 (figure 38) for storing data in said storage cartridge (§154).

Shimada further teaches **a receiving/ejection operation determining device** (portion of the CPU 135 for determining presence of a storage cartridge) **that determines** (figures 39-41 and §§159-170) **which of a standby state (S107) in which a loading operation for receiving said storage cartridge is awaited, a loading state (S111) in which the loading operation is being performed (§163), a loading completed state (S106) in which the loading operation is complete (§163), and an ejecting state (S114-S117) in which an ejection operation for ejecting said storage cartridge is being performed (figure 41), the operative state of said receiving and ejecting device corresponds (§159).**

Finally, Shimada teaches **an access inhibiting device** (portion of CPU 135 logic which controls reading and writing to the installed storage cartridge) **that inhibits access to said storage medium based on control by said storage operation from being gained when the operative state corresponds to one of the loading state and the ejecting state (§159).** As shown in figure 40, when the system is “loading” (step 111) access is inhibited until step 111 completes and then access may be made by the CPU 135 to the hard disk 1 in step 106. Further, as shown in figure 41, access is inhibited (step 116) when an ejection state is entered.

As per claim 19, it can be seen that among the four operational state discussed above (stand-by, loading, loading complete, and ejecting), the only state in which access is not inhibited is in the loading complete state (S106). It can be seen that since the CPU 135 (storage operation and control device) does not access the storage cartridge until it has been loaded, the storage

Art Unit: 2186

control operation device 135 **inhibits the access to the storage medium from being gained when the operative state of the receiving and ejecting device corresponds to a state other than the loading completed state** (i.e. stand-by, loading, or ejecting state).

As per claim 20, Shimada teaches that in order for the system of figure 9 to access the storage cartridge 1, the CPU 135 must perform accesses (§159); however, before accesses can be performed, one of the steps to inhibit access is to detach the storage cartridge from the connection, which is notified by a detection circuit 132 (figure 30) which determines whether or not a complete coupling of the storage cartridge 1 and the connector 123 of the main unit 9 has occurred (§154). When a storage cartridge is *physically* loaded into the system (shown for example in figure 29), the cartridge may not yet be completely loaded (i.e. attached via connector 123 as shown in figure 30). In order to inhibit access, one of the steps performed by the access inhibit device (as defined above) is to drive the pulse motor to rotate clockwise 15 rotations, thereby separating the palette 7 which the storage cartridge is attached from the connector 123 (§176). The operation of *driving the pulse motor* is performed in a same matter when the storage cartridge is unloaded (and needs to be loaded) as shown in step 102 of figure 39. In both cases, access is inhibited since the cartridge is not yet connected to connector 123 for access, and in both cases, **providing control such that the operation of driving the pulse motor occurs**. In other words, when unloaded (i.e. not connected to the connector 123 for access), the access inhibit device drives the pulse motor (step 102) but in a direction to make a connection. Similarly, when a storage cartridge is loaded (figure 30) and an the access inhibiting device wishes to inhibit access from being gained, it will drive the pulse motor (i.e. same manner in that the pulse motor is driven both times) but this time the objective of driving the motor is to remove

Art Unit: 2186

the connection (step 117 of figure 41). Therefore, **irregardless of whether or not the storage cartridge is physically located in the main unit** (i.e. inserted [figure 29] but not completely ready for access [figure 30]), the access inhibiting circuit drives the pulse motor.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada (U.S. Patent Application Publication No. 2003/0073350), as applied to claims 18,19,23, and 24, above, in view of Shimizu et al. (U.S. Patent No. 6,067,201).

As per claim 21, Shimada teaches aborting and access to the storage cartridge (Step 116 - figure 41) as a step to inhibit access during an eject state, and therefore provides a signal cutoff device (portion of the access inhibiting logic that performs step 116) but does not specifically teach that the **signal cutoff device electrically cuts off at least part off at least part of electric signals transmitted between the storage operation control device 135 and the storage cartridge**. Shimizu teaches a method of inhibiting access to a magnetic removable media (similar to Shimada) with specific detail of inhibit operations during an eject state (figure 8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have combined the system of Shimada with the write inhibit teaching of Shimizu in

Art Unit: 2186

order to have properly stopped the present write operation in order to prevent the medium from substantial damage before being abruptly removed from the system (column 2, lines 33-40, of Shimizu). Shimizu teaches that the device which inhibits access during an eject sequence (i.e. the signal cutoff device that performs the step of 116 of Shimada) **electrically cuts of the electric signals transmitted between the storage operation control device and the storage cartridge** by means of a write gate inhibit signal (step s2 - figure 8) - column 7, lines 16-20.

Allowable Subject Matter

Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or reasonably suggest, either alone or in combination, the signal cutoff device comprising a semiconductor device

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane M. Thomas whose telephone number is (571) 272-4188. The examiner can normally be reached on M-F 8:30 - 5:30.

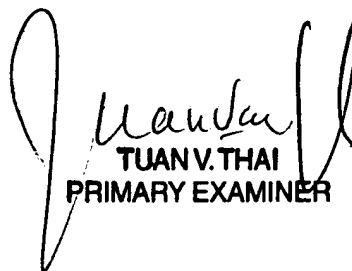
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt M. Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2186

Information regarding the status of an application may be obtained from the Patent . Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Shane M. Thomas


TUAN V. THAI
PRIMARY EXAMINER